

OVERVIEW OF

Truck and Bus Regulation Reducing Emissions from Existing Diesel Vehicles

Rules to achieve significant emission reductions and protect public health

In December 2008, the California Air Resources Board (ARB) approved a new regulation to significantly reduce emissions from existing trucks and buses operating in California.

Why is this regulation needed?

Most diesel trucks and buses, which can last 20 years or longer, have little or no emission controls. As a result, these vehicles emit large amounts of smog forming oxides of nitrogen (NO_x), and toxic soot (also known as particulate matter or PM). All told, trucks and buses account for about 30 percent of the statewide emissions of NO_x and about 40 percent of all diesel PM emissions. Emissions from trucks contribute to many adverse health effects, including about 4,500 premature deaths per year. Reducing emissions from in-use trucks and buses is necessary to meet federally imposed clean air standards and to reduce the adverse health effects from truck and bus pollution.

What types of vehicles are subject to the regulation?

Affected vehicles include on-road heavy-duty diesel fueled vehicles with a gross vehicle weight rating (GVWR) greater than 14,000 pounds, yard trucks with off-road certified engines, and diesel fueled shuttle vehicles of any GVWR. Out-of-state trucks and buses that operate in California are also subject to the regulation. Drayage trucks and private utility-owned vehicles are subject to the regulation beginning January 1, 2021.

Who must comply with the regulation?

Any person, business, school district, or federal government agency that owns, operates, leases or rents affected vehicles. The regulation also establishes requirements for any in-state or out-of-state motor carrier, California-based broker, or any California resident who hires or dispatches vehicles subject to the regulation. In addition, California sellers of a vehicle subject to the regulation would have to disclose the regulation's potential applicability to buyers of the vehicles.

What industries and types of fleets would be subject to the regulation?

Approximately 170,000 businesses in nearly all industry sectors in California, and almost a million vehicles that operate on California roads each year would be affected. Some common industry sectors that operate vehicles subject to the regulation include: for-hire transportation, construction, manufacturing, retail and wholesale trade, vehicle leasing and rental, bus lines, and agriculture.

What does the regulation require?

The regulation requires fleets to install exhaust retrofits that capture pollutants before they are emitted to the air, and to accelerate vehicle replacements to those with cleaner engines. The regulation does **not** require any vehicles be replaced until 2013, and it **never** requires all the vehicles within a fleet to be replaced in a single year.

In general, the regulation requires owners to reduce emissions in their fleet by upgrading existing vehicles one of three ways. The first option is to install PM retrofits and replace vehicles (or engines) according to a prescribed schedule based on the existing engine model year. The second option is to retrofit a minimum number of engines each year with a high level PM exhaust retrofit and to replace a minimum number of older engines with newer engines meeting the 2010 new engine standards. The third option is to meet a fleet average. With this option, a fleet operator can use PM and NO_x emission factors established by the regulation to calculate the average emissions of the fleet. Then, by the applicable compliance date each year, the owner can demonstrate that the fleet average emissions for PM and NO_x do not exceed the PM and NO_x fleet average emission rate targets set by the regulation.

Are there special provisions for low-use vehicles?

Vehicles that operate less than 1,000 miles and 100 hours per year in California, are exempt from the vehicle cleanup requirements of the regulation. In addition, vehicles greater than 33,000 pounds GVWR operating less than 7,500 miles per year and vehicles less than 33,000 pounds GVWR operating less 5,000 miles per year would be required to have a PM retrofit but would not be subject to engine or vehicle replacement requirements until January 1, 2021.

What other special provisions are provided?

The regulation also has a number of provisions or delays for low-use vehicles, agricultural vehicles, motor coaches, certain unique vehicles, and vehicles operated in cleaner areas of the state. However, by January 1, 2023, all engines would meet the 2010 new engine emission standards.

What if a diesel retrofit is not available or can not be safely installed for a particular vehicle?

Fleet owners may request a one-year extension of the PM compliance deadline if they document that the highest level verified PM exhaust retrofit cannot be safely installed or is unavailable.

When does the regulation take effect?

For most fleets, the first performance requirements for PM do not begin until January 1, 2011, followed by engine replacement requirements to reduce NOx emissions starting January 1, 2013. For fleets with three or fewer affected vehicles, none of the performance requirements begin until January 1, 2014. The regulation is phased in such that by January 1, 2023, all vehicles must have a 2010 model year engine or equivalent.

What are the requirements for school buses?

School buses are required to meet the proposed PM requirements and would be subject to several special provisions and timetables specifically designed for school buses. School buses manufactured prior to April 1, 1977, will be required to be removed from service by January 1, 2012; otherwise school bus replacements are not required. All remaining buses may meet one of the three proposed compliance options to reduce PM emissions.

What are the estimated benefits of the regulation?

The regulation is projected to provide significant diesel PM and NOx emissions reductions that would have a substantial positive air quality impact throughout California. PM emissions are projected to be reduced by about 13 tons per day in 2014 and 3.5 tons per day in 2023. NOx emissions are projected to be reduced by about 124 tons per day and 98 tons per day, for 2014 and 2023, respectively. These reductions are critical towards meeting federal clean air standards. The regulation would also reduce diesel PM emissions by the maximum level achievable from in-use on-road diesel vehicles. Staff estimates that approximately 9,400 premature deaths statewide would be avoided by the year 2025 from the implementation of the regulation, and would provide associated health benefits of \$48 to \$69 billion.

What are the estimated costs to consumers from the regulation?

The cost impact of the regulation is not expected to be significant. While it is expected that most fleets will pass through these costs to their customers, this is expected to result in a negligible impact on consumers, equating to about a few cent increase for a pair of shoes, less than one one-hundredth of a cent increase per pound of produce, or an increase of from \$3 to \$10 for a new car.

Is incentive money available?

Incentive funds are available in many areas of the state. Please see the ARB website or the related fact sheet on financial incentives for additional information.

For more information

Please visit our website at: www.arb.ca.gov/dieseltruck or call the ARB's diesel hotline at (866) 6DIESEL (634-3735).

To obtain this document in an alternative format please call: (916) 322-4505 (voice); (916) 324-9531 (TDD, Sacramento area only); or (800) 700-8326 (TDD, outside Sacramento). For TTY/TDD/or S2S, dial 711 for the California Relay Service.